INSTITUTIONAL BIOSAFETY COMMITTEE MEETING
October 25, 2022
Blount Hall A004 & Zoom Meeting

MEMBERS PRESENT: *Chair:* Elizabeth Fozo, *Vice Chair:* Deidra Mountain, Marc Caldwell, Lori Cole, Lezlee Dice, Paul Dalhaimer, George Dizikes, Doris D'Souza, Reza Hajimorad, Jun Lin, Jessica Vélez, Ling Zhao

Ex-Officio: Christopher Baker, Caleb Cummings, Carolina Dolislager, Linda Hamilton, Sandra Prior, Brian Ranger, Daniel Thomas, Jessica Woofter

MEMBERS ABSENT: Feng Chen, Brittany Isabell, Jae Park

OTHERS PRESENT: Daniel Bryan

Opening:

The IBC Chair called the meeting to order at 2:34 PM. The minutes for September 14, 2022, IBC Meeting were reviewed and approved as written.

Full Member Review IBC Registrations:

#IBC-06-302-1 (Daniel Roberts) Infectious Agents & Recombinant DNA, III-E-2-a, 3-year rewrite
Dr. Roberts' registration covers molecular cloning of plant membrane transporters, regulatory protein kinases, and calcium-binding proteins from soybean, Arabidopsis, and Medicago for structure-function analysis in *E. coli*, *Xenopus laevis* oocytes in culture, or Pichia pastoris. Briefly, oocytes from *X. laevis* will be used to allow the production of soybean, Medicago, or Arabidopsis transporters to ascertain structural and functional relationships between the protein sequence and transport function in vitro. Additionally, the recombinant molecules will be used to investigate gene expression, characterize Arabidopsis mutants, and generate transgenic Arabidopsis plants (fluorescent reporter systems, e.g., GFP). For the latter, standard Agrobacterium-mediated transformation techniques will be used. Finally, Nicotiana or Arabidopsis plants will be transiently transfected (Agrobacterium) with turnip mosaic virus UK-1 conjugated to a fluorescent protein marker so that infected tissues can be visualized by fluorescence microscopy. The committee voted to approve the registration pending the addition of *E. coli* strains to the host section; the addition of the word binary to the gateway vectors section; the addition of the reporter gene to the insert genes section; the addition of the growth chamber room for Question 8.1; and the clarification about autoclave procedures for solid or non-sharp waste.

#IBC-16-444-2 (Thomas Denes) Infectious Agents & Recombinant DNA Registration, III-D-1-a; 2-a, 3-year rewrite
Dr. Denes' research focuses on the effects of phage resistance, bacterial envelope composition, and changing environmental conditions on the fitness and physiology of bacterial foodborne pathogens such as *Salmonella spp.* (non-typhoidal) and *Listeria monocytogenes*. Briefly, gene deletions will be created by overlap extension PCR delivered via temperature-sensitive suicide vectors. Deletion phenotypes will be confirmed through complementation with the wild-type gene (standard molecular techniques). Target genes encode membrane-associated proteins,

which may play a role in phage and/or antibiotic resistance. Other techniques include subculturing, phage/bacteria enumeration, DNA/RNA extractions, and lectin binding assays. Containment was set at BSL-2. The committee approved the registration pending the renaming of *Haemophilus somnus* to *Histophilus somni*; and the addition of a statement in the Technical Summary indicating corresponding procedures for the agents listed.

#IBC-19-537-2 (Oudessa Kerro Dego) Infectious Agents & Recombinant DNA, III-D-a, New registration

Dr. Almeida's registration covers the study of *Mycoplasma bovis* mastitis vaccine treatments for dairy herds. Studies will be performed both *in vitro* and *in vivo*. The in vitro research involves monitoring the growth of mutant clones in milk and resistance to the lytic action of the blood defense system. The in vivo research involves the study of cows infected with the wild-type parent strain (*M. bovis* PG45) and two less virulent mutants. Personnel involved in this project will use disposable PPE, including disposable paper coveralls, latex gloves, goggles, disposable masks, and disposable footwear covers in study areas. After use, disposable PPE will be collected in a dedicated bin lined with double autoclave bags, sterilized by autoclave, and disposed of. Personnel will require a full-body shower and change of clothes before tending to other non-study animals or dairying areas. Cows will be milked with separated individual milking machine equipment. After each milking, the machine will be cleaned and disinfected following site SOP. The floor corresponding to the milking area will be treated with chlorine after milking to eliminate *M. bovis* mutant clones in milk that could be leaked during the milking process. Milk and effluents from these cows will be collected and packaged for disposal through the UTIA bio-waste contractor. At the end of the experiment, cows inoculated with the mutant clones will be euthanized at the CVM, and carcasses will be destroyed through the CVM alkaline digester. The committee voted to table the registration pending the addition of a summary of the work in the Nontechnical Summary section; clarification about the source of the DNA for recombinant organisms; clarification about the introduction of mutant clones to the mammary glands of dairy cows by infusion into the teat canal; the addition of the Risk Group for the wild-type strain of Mycoplasma bovis PG45; clarification about centrifugation and aerosolization of infectious agents risks; the addition of the ABSL-2 risk category for the JRTU LAF location; the addition of laundering protocols; and the addition of the biological spill response.

Old Business:

Administrative Report

i. Contingencies

Following up on September 14, 2022, IBC Meeting, Dr. Jennifer DeBruyn's registration (#19-539-2) was corrected to include the addition of any personnel that will be working on the project; clarification of why question 6.9 was checked; clarification if donor subjects are handled personnel and, if so, what PPE is worn for sampling; and the addition of the exposure time for the autoclave in PBB 209. Dr. Lindsey Burcham's registration (#22-580-2) was corrected to include the addition of all IACUC personnel; correction of typographical errors in the Nontechnical Summary; clarification of experiment procedures in the Nontechnical Summary; the addition of specific targets for insert genes in the rDNA section; clarification in question 6.2 about work being done with Akkermansia muciniphila and Lactobacillus; checking "yes" for question 6.2; the addition of gene/protein names being considered for deletion/insertion and complementation in the Technical Summary; the addition of doses for the bacteria being used to gavage or for injection; the addition of host cells and animal models; and the removal of Mossman Rooms 625 and 625A.

ii. *Administrative Approvals*
The Biosafety Officer approved the following registration updates for the month of September: Dr. Glady Alexandre's registration (#08-334-1) was approved on 9/22/2022 to include updates to personnel, the addition of soil isolates with genome sequences (non-pathogens: *Pseudomonas fluorescens, Pantoea, Rhizobium, Asospirillum, Variovax*) as well as updates to personnel, grant information, PPE disinfection procedures, and liquid waste locations. Dr. Lee Jantz's registration (#16-446-2) was approved on 9/26/2022 as a 3rd-year renewal for using human-derived materials (human remains). Dr. Scott Lenaghan's registration (#19-535-1) was approved on 9/20/2022 for updates to grant information. Dr. Ivis Chaple's registration (#22-581-2) was approved on 9/26/2022 as a New Registration for using human-derived cell lines (PC3 cells, human prostate, Head and Neck Cancer cells, A panel of 6 cell lines from salivary gland, tongue, hypopharynx, and pharynx. Each culture contains genomic mutations in one or more of the following genes according to the Sanger COSMIC database: CDKN2A, TP53, SMAD4, PIK3CA, and KDM5C).

iii. *Administrative Terminations*
Dr. Paul Dalhaimer's registration (#10-354-1) was administratively terminated on 10/3/2022.

iv. Administrative Exemptions:
None.

v. Accidents, Injuries/Exposures:
Brian and Linda notified the committee that there was an incident involving a mouse bite from Dr. Lydic's study. The incident was referred to Brian Cranmore (Occupational Health Nurse) and the Office of Lab Animal Care.

vi. Laboratory Report:
None.

vii. iMedRIS Update, Manual Reviews, & System Orientation:
None.

Vote Charter & SOPs
Brian notified the committee to hold off on voting for the IBC Charter changes as some additional changes in reporting structures will be added soon. The committee voted on the IBC Audit SOP, IBC Training SOP, and IBC Event Escalation SOP as written. The committee approved the IBC OHP SOP pending the correction to the document dates. The committee approved the IBC RRR SOP pending correcting the referenced Biosafety website.

New Business:

Reminder to Researchers about Minors in Labs
The Chair requested that LSS remind researchers about the minors in lab spaces policy and age restrictions, specifically for BSL-2 spaces. The Chair stated that Microbiology has been getting many requests for tours of their laboratory suites, which are tight spaces and unsuitable for minors. Brian stated that the policy is specific to individuals seeking to work in lab spaces and not for transient groups. Brian agreed to send the Chair guidance for dealing with transient groups and tours in lab spaces.

UTIA Biology Labs Inspections & IBC Containment Practices
Linda notified the committee that all UTIA and CVM lab audits had been completed. She praised

these groups for positively communicating and collaborating with the LSS group during the audit process. Brian notified the committee that LSS plans to partner with IACUC on their semi-annual program reviews as they walk through facilities and conduct the safety reviews. Linda also asked the committee what the IBC would like LSS to do that open up a conversation around containment and whether it is still adequate or relevant to the researcher's work.

New LSS Staff Introduction

Linda introduced Christopher Baker (Biological Safety Technician), Carolina Dolislager (Biological Laboratory Safety Specialist), and Daniel Thomas (Senior Biological Laboratory Safety Specialist).

Draft IBC Registration Form

Jessica notified the committee that she created draft versions of each form section for the committee to review and comment on. The Chair asked volunteers to form a subcommittee to review each document section. A January IBC Meeting will be scheduled to review the form and draft changes to the registration form.

November Meeting Doodle Poll

Jessica created a doodle poll for November's meeting and asked committee members to indicate their availability.

The meeting adjourned at 4:31 PM. The next meeting scheduled is for November 16, 2022, from 9:30 – 11:30 AM EST, via Zoom.